

WE CLAIM:

1. A spark plug (1) for an internal combustion engine having at least two electrodes, in which the electrodes (2.1, 2.2) are formed of a first part (5) made of a substrate material and a surface part (7) made of a material more durable than the substrate material, **characterized** in that the surface part (7) is fastened to the first part via an intermediate part (6), and that the joint between the surface part (7) and the intermediate part (6) is an explosion welding joint.
2. A spark plug (1) for an internal combustion engine according to claim 1, **characterized** in that the surface part (7) is formed of at least one metal of the Pt group (Pt, Pd, Ir, Rh, Ru, Os) or an alloy thereof.
3. A spark plug (1) for an internal combustion engine according to claim 1 or 2, **characterized** in that the joint between the surface part (7) and the intermediate part (6) is essentially homogenous on the whole surface area (10) of the of the joint.
4. A spark plug (1) for an internal combustion engine according to claim 3, **characterized** in that the joint between the substrate material part of the first part (5) and the intermediate part (6) is a conventional melt welding joint.
5. A spark plug according to any of the preceding claims, **characterized** in that the material strength of the surface part (7) perpendicular to the joint surface (10) of it and the intermediate part (6) is 0.05 - 2 mm.
6. A method for producing a spark plug (1) having at least two electrodes (2.1, 2.2), in which spark plug the electrodes are produced from at least a first part (5), made of the substrate material of the spark plug, and a surface part (7), made of a

material more durable than the substrate material, **characterized** by the following combination of production stages, in which

- a blank (8) is formed, comprising a surface part (7) and an intermediate part (6), by joining the surface part to the intermediate part by means of explosion welding,
- a part (9) with a suitable form is separated from the blank to form the electrode of the spark plug, and
- the part (9) separated from the blank is fastened to the first part (5) of the spark plug so that the joint is made between the said first part (5) and the intermediate part (6).

7. A method according to claim 6, **characterized** in that the surface part (7) of the blank (8) is formed of a planar piece consisting of at least one metal of the Pt group or an alloy thereof, the piece being explosion welded to the intermediate piece, also planar.

8. A method according to claim 7, **characterized** in that the surface part (7) of the blank (8) is formed of powder consisting of at least one metal of the Pt group or an alloy thereof, the powder being simultaneously solidified and joined to the intermediate piece by means of explosion welding.